

What is claimed is:

1. A method of scaling an application graphical user interface for display with any of a plurality of heterogeneous device platforms, the method comprising:

5 a) creating an instance of an intermediate representation of a device platform independent application graphical user interface;

b) dynamically customizing the intermediate representation as a function of the capabilities of one of the heterogeneous device platforms;

10 c) extracting a device platform dependent application graphical user interface from the customized intermediate representation; and

d) displaying the device platform dependent application graphical user interface with said one of the heterogeneous device platforms.

15 2. The method of claim 1, wherein b) comprises removing unnecessary tasks from the intermediate representation as a function of the capabilities of said one of the heterogeneous device platforms.

20 3. The method of claim 1, wherein b) comprises transforming the intermediate representation as a function of the capabilities of said one of the heterogeneous device platforms.

25 4. The method of claim 1, wherein a) comprises migrating a scalable application to a mobile device, the scalable application comprising the device platform independent application graphical user interface.

5. The method of claim 1, wherein a) comprises representing at least one device independent graphical user interface component with the intermediate representation.

30 6. The method of claim 1, wherein a) comprises instantiating the intermediate representation with a server computer.

7. The method of claim 1, wherein a) comprises transmitting the intermediate representation to a server computer.

8. The method of claim 7, wherein b) comprises transmitting the
5 customized intermediate representation from the server computer to said one of the
heterogeneous device platforms.

9. The method of claim 1, wherein a) comprises hierarchically representing a plurality of tasks with the intermediate representation.

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10. A method of scaling an application graphical user interface for display on a display screen of any of a plurality of heterogeneous device platforms, the method comprising:

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a) instantiating a logic structure from a device platform independent application graphical user interface, the logic structure comprising at least one logical panel and representation of at least one graphical user interface component;

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b) selectively retaining the at least one logical panel and the at least one graphical user interface component in the logic structure as a function of suitability of the at least one logical panel and the at least one graphical user interface component to one of the heterogeneous device platforms;

c) configuring the at least one logical panel and the at least one graphical user interface component in a layout compatible with the capabilities of a display screen of said one of the heterogeneous device platforms; and

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d) extracting the at least one graphical user interface component and the at least one logical panel from the logic structure.

11. The method of claim 10, further comprising e) displaying a device platform dependent application graphical user interface on the display screen as a function of the at least one graphical user interface component and the at least one logical panel extracted from the logic structure.

12. The method of claim 10, wherein a) comprises specifying properties comprising layout parameters of the logic structure with the device independent application graphical user interface.

5 13. The method of claim 10, wherein b) comprises removing the at least one graphical user interface component from the logic structure as a function of tasks unsuitable to said one of the heterogeneous device platforms.

10 14. The method of claim 10, wherein a) comprises specifying retention of the at least one logical panel within the logic structure with the device platform independent application graphical user interface.

15 15. The method of claim 10, wherein a) comprises specifying a suggested layout structure for the at least one logical panel and the at least one graphical user interface component with the device platform independent application graphical user interface.

20 16. The method of claim 10, wherein a) comprises specifying a layout priority for the at least one logical panel with the device platform independent application graphical user interface.

25 17. The method of claim 10, wherein a) comprises specifying layout constraints for the at least one graphical user interface component with the device platform independent application graphical user interface.

18. The method of claim 10, wherein a) comprises specifying layout groups of the at least one logical panel with the device platform independent application graphical user interface.

30 19. The method of claim 10, wherein a) comprises specifying a label for the at least one logical panel with the device platform independent application graphical user interface.

20. The method of claim 10, wherein d) comprises accessing a scalable graphical user interface library to obtain the at least one graphical user interface component.

5 21. The method of claim 10, wherein d) comprises downloading the at least one graphical user interface component from a server computer.

10 22. A scalable graphical user interface architecture for scaling an application graphical user interface to the display screen of any of a plurality of heterogeneous device platforms, the scalable graphical user interface architecture comprising:

15 a target device platform comprising a display screen;
a device platform independent application graphical user interface operable within the target device platform to initiate creation of an instance of an intermediate representation of the device platform independent application graphical user interface;
a customizing module operable to customize the intermediate representation as a function of the capabilities of the target device platform; and
20 a render manager module operable to produce a device platform dependent application graphical user interface on the display screen as a function of the customized intermediate representation.

25 23. The scalable graphical user interface architecture of claim 22, further comprising a scalable graphical user interface library operable with the device platform independent application graphical user interface to create the instance of the intermediate representation.

30 24. The scalable graphical user interface architecture of claim 22, wherein the customizing module comprises a task manager module operable to retain tasks applicable to the functionality of the target device platform and the display screen.

25. The scalable graphical user interface architecture of claim 22, wherein the customizing module comprises a transformation manager module operable to configure the layout structure of the display as a function of properties specified by the device platform independent application graphical user interface.

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26. The scalable graphical user interface architecture of claim 23, wherein the scalable graphical user interface library comprises a user interface event translator module, the user interface event translator module operable to translate a graphical user interface event generated by the target device platform to an action compatible 10 with the device platform independent application graphical user interface.

27. The scalable graphical user interface architecture of claim 22, wherein the intermediate representation comprises at least one logical panel and representation of at least one graphical user interface component.

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28. The scalable graphical user interface architecture of claim 22, wherein the target device platform comprises one of a pager, a wireless phone, a personal digital assistant, a hand-held personal computer, a vehicle navigation system and a notebook personal computer.

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29. The scalable graphical user interface architecture of claim 22, wherein the device platform independent application graphical user interface is compatible with, but device platform independent of any of the heterogeneous device platforms.

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30. The scalable graphical user interface architecture of claim 22, wherein the target device platform comprises any one of a plurality of heterogeneous device platforms.

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